

Remarks

The Applicants note the objection to the Abstract. The Applicants have accordingly amended the Abstract and include a new copy on a separate sheet for the Examiner's convenience.

Claims 1-3 stand rejected under 35 U.S.C. § 112 with respect to a typing error in equation (1). Claim 1 has accordingly been amended to remove the typographical error. Also, the several occurrences of the error throughout the application have been amended so that the application in its entirety is in conformance with the original international application document. Withdrawal of the rejection is respectfully requested.

The Applicants have further amended Claim 1 to recite Si in an amount of more than 0.05 to 0.15%. Support may be found in the Applicants' Specification on page 8, line 2, for example. Also, Claim 1 has been amended to recite that the product has a texture composed of more than 5 to 30% of a bainite phase on an area percent basis. Support may be found in the Applicants' Specification on page 14, line 4, for example. Entry into the official file and consideration on the merits is respectfully requested.

Claims 1-3 stand rejected under U.S.C. 35 § 102 over JP '401. The Applicants note with appreciation the Examiner's detailed comments hypothetically applying JP '401 to those rejected claims. The Applicants nonetheless respectfully submit that JP '401 fails to anticipate those claims. Reasons are set below.

As noted above, Claim 1 recites an Si content of "more than 0.05 to 0.15%." The Applicants respectfully submit that this range is different from the range of JP '401. In particular, the uppermost quantity of Si in JP '401 is 0.05%. This is outside of the claimed range, which has a lower range of more than 0.05%. As such, there is no overlap. Inasmuch as JP '401 fails to disclose, either explicitly or implicitly, every aspect set forth in Claim 1, the Applicants respectfully submit that JP '401 is inapplicable under U.S.C. 35 §102. Withdrawal of the rejection is respectfully requested.

Claims 1 stands rejected under 35 U.S.C. §103 over US '688. The Applicants again note with appreciation the Examiner's detailed comments hypothetically applying

US '688 to Claim 1. The Applicants respectfully submit that US '688 fails to render Claim 1 obvious. Reasons are set forth below.

As previously mentioned, Claim 1 recites that the steel product is composed of more than 5% to 30% of a bainite phase on an area percent basis. The Applicants respectfully submit that US '688 fails to disclose this or to provide any reasonable expectation that US '688 compositions would have such a claimed amount of bainite. In fact, the Applicants respectfully submit that US '688 teaches those skilled in the art that the steel material has a micro structure formed of ferrite and laminar pearlite with the amount of bainite being 5% or less in col. 2, lines 3-5. This is confirmed in Table 2 of US '688 wherein every single example contains ferrite and laminar pearlite only.

The Applicants note that there is a control sample in US '688 that contains an amount of bainite within the Applicants' claimed range. That sample is Control 2 and it contains 20% bainite. However, that Control 2 sample has a different composition from what the Applicants claim. For example, the Control 2 sample has an Si content of 0.27% which is outside of the Applicants' claimed range of 0.05% to 0.15%. Also, the amount of Mo in the Control 2 sample is 0.02%. This is outside of the Applicants' claimed 0.05% to 0.5%.

As a consequence, the Applicants respectfully submit that the US '688 disclosure would lead one skilled in the art to reasonably conclude that steels having a compositional overlap with the composition of Claim 1 would have a structure that does not contain 5 to 30% bainite as claimed. Moreover, it is an objective of US '688 to not have an amount of bainite within the Applicants' claimed range. In fact, US '688 leads those skilled in the art away from the Applicants' claimed range and essentially uses a composition having a bainite range within the claimed range as a comparative example (although the comparative example has a composition outside of the claimed range). The Applicants, therefore, respectfully submit that US '688 leads those skilled in the art away from the Applicants' claimed subject matter. As a consequence, US '688 is inapplicable. Withdrawal of the rejection is respectfully requested.

Claims 2 and 3 stand rejected under U.S.C. 35 §103 over the hypothetical combination of US '105 with US '688. The Applicants have already established that US '688 is inapplicable to Claim 1. The Applicants respectfully submit that further hypothetically combining US '105 with US '688 would still not cure the deficiency set forth above with respect to Claim 1. Therefore, even if one skilled in the art were to make the hypothetical combination of US '105 with US '688, the resulting combined steels would still lead one skilled in the art away from the subject matter of Claims 2 and 3. In particular, the resulting steels would have a quantity of bainite that is outside of the Applicants claimed more than 5 to 30% bainite. Withdrawal of the rejection of Claims 2 and 3 is also respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,


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TDC/vp